

August 26th, 1930, of a ♀ *Papilio machaon*, flying over clover in quite fresh condition. I understand other captures have been made in this corner of Kent in recent years, and that a colony existed many years ago at Dover. The specimen does not differ markedly from any Wicken specimens and is quite unlike the French ones I have had, but of course it is quite impossible to say what its origin may have been.

Stray notes on Erebid species.

By B. C. S. WARREN, F.E.S.

(1) A new race of *E. ligea*.

It would have scarcely occurred to one in view of the long list of names already attaching to this species, that there still existed, in a European country, an unnamed race, and that one of the finest of the western forms of the species. Such however is the case.

Thanks to the great kindness of Dr. A. Schmidt of Budapest, I have been, recently, able to examine a considerable number of *Erebias* from the Hungarian National collection. Among much of interest, was a nice series of *ligea* from Herkulesfürdő, a locality known to many English collectors. Dr. Schmidt thought that these specimens represented an unrecognised form, and asked me, if this was so, to describe it. His surmise proved correct, and the only reference to this race in literature that I have been able to find, is a comment by O. Diószeghy in his work on the fauna of the Retyezat Mts.; where he states that a form transitional to the eastern *ajanensis* is not rare in various localities. He is perfectly accurate in this observation, for the new race has one or two features in common with *ajanensis*, which are not to be found in other western forms.

E. ligea race **herculeana** nov.

A large form; ♂ 52-56mm, ♀ 52-58mm. (Centre of thorax to tip of forewing $\times 2$). On the upperside the bands of colour are practically the same width throughout, while they extend right to the inner margin of the forewing, starting on the hindwing from the costa, instead of a little below it, as is so often the case. The bands are, further, in most of the specimens, broader than usual, and the inner edge on that of the forewings is nearly straight, and not slightly concave. On the forewings there are three large elliptical black spots, and one very small black dot just below the two apical spots. Spots on the hindwings variable; considerably reduced in size, two to four in number, occasionally quite absent, even in the ♀. In the ♂ there are usually no white pupils in any of the spots, though these may sometimes be present on the hindwing as tiny points. In the ♀ the white pupils may be absent, or present in the two apical spots on the forewings.

On the underside of the forewings the bands are even broader than on the upperside, the two apical spots have distinct white pupils, even in the ♂. The hindwings are most remarkable, being absolutely unicolorous, instead of being more or less marked with a series of bands. On this absolutely plain ground colour, the white streak, so familiar in this species, stands out with vivid intensity, being extremely broad at the costa, and continuing right across the wing in an unbroken line, thus resembling *ajanensis*, though of course the streak is not so

broad as in the latter. In all other western forms of the species the streak is broken, and more often than not does not extend beyond the middle of the wing. The antimarginal band which usually lies just outside the streak, is scarcely visible, faint and narrow, indeed when looked at casually it is not seen at all. The spots usually situated in this band are, on the contrary, very prominent, the red rings very sharply marked of a dark mahogany colour, the black centres small but distinct, and no white pupils. These spots number three to five, the latter number being very rare in other forms of the species where as the rule there are only three or four. In the ♀ the white streak does not seem to be quite so continuous, but the ground colour is just as unicolorous, which is the greatest contrast to the usual very variegated underside of the ♀ hindwing. The spots also, in this sex, are smaller, and the rings less sharply marked and more yellowish in colour. There are no basal markings inside the white streak in either sex, though one or two specimens show a trace of a second white line, marking off the area where normally the basal band would be.

The chief characteristics of *herculeana* are:—its large size and very fully developed bands coinciding with the loss of the white pupils on the upperside of both wings as well as on the underside of the hindwings; the other races in which there are no pupils usually have the bands reduced in width or even broken, with a strong tendency to a smaller size. Added to this are the unicolorous underside of the hindwings, the continuous white streak and very prominent spots, in the ♂ s.

It is quite possible that the ♀ s may show these last characteristics more than I suppose, for there were only three in the series, and unfortunately none of these were from Herkulesfürdő.

One ♂ (Herkulesfürdő) and one ♀ (Retyezat Mts.) are especially characterised by the enormous development of the bands, which are double the width they are in some specimens; these fine specimens are referable to ab. *borsa*, Strand. *Herculeana* is widely distributed in the western Transylvanian Mts., occurring (according to Diószeghy) in many localities in the Retyezat Mts., from where there are also several specimens in the Hungarian collection. In these localities other forms of the species are plentiful also; while, so far, from Herkulesfürdő I have only seen specimens of *herculeana*. In view, however, of the fact that none of the western races known, have developed anything like complete dominance in any locality, I feel more or less certain that *herculeana* is no exception, and will be found in the future not to be the only form of *ligea* in the Herkulesfürdő district. Such variation as the present specimens show, further supports this supposition. It is a difficult insect to describe, but is nevertheless very striking to the eye.

(2) *E. epiphron* ssp. *transsylvanica*, Rbl.

Another feature of great interest in the Hungarian collection was a series of *epiphron* from various localities in the Carpathians and Transylvanian Alps, referred (doubtfully) to *transsylvanica* by Dr. Schmidt. Among others, were a series from the Retyezat Mts., and two ♂ s and one ♀ from Bucsecs; the latter the locality from which Rebel's types of *transsylvanica* came.

These specimens differed so much from each other, that Dr.

Schmidt, who thought the Retyezat specimens agreed with the description of *transsylvanica* felt doubtful if the others (in spite of the locality) could be Rebel's insect. Thanks to Prof. Rebel I have been able to establish the identity of these very interesting races, for he most kindly lent me his type specimens and another specimen for dissection.

The types agreed exactly with the specimens in the Hungarian collection from Bucsecs (eastern Transylvanian Mts.) and they were of course equally distinct from the Retyezat (western Transylvanian Mts.) specimens. The latter are a highly specialised form of *transsylvanica*, and may be described as:—

E. epiphron ssp. *transsylvanica* race **retyezatensis** nov.

This form shows all the characteristics of *transsylvanica*, but developed to such an exaggerated extent that at first sight it appears to be a totally different insect. It is, however, beyond all question a development of the latter. The whole coloration, in both sexes, is much more brilliant upper and underside, the bands being of a golden, rather than reddish shade of colour. On the upperside of the forewings the band contrasts with the ground colour much more sharply, is often much broader, and extends at the apex of the wing more deeply and markedly towards the base than is the case in *transsylvanica*, while the black spots are usually larger and elliptical, instead of round. On the upperside of the hindwings, in contradistinction to the great development of the bands on the forewings, there are only four, sharply outlined, oval spots, standing well apart from each other and containing black spots of varying size. In *transsylvanica* these spots are round, with a soft hazy outline, and are often so extended as nearly to touch each other. In *retyezatensis* the form of the hindwing spots is similar to those seen in *E. christi*; another feature being that the second from the costa is always much the largest, as in *E. eriphyle*.

The development of the forewing band attains the maximum ever found in any form of *epiphron*, equalling, and even passing the width shown by *silesiana* ♀. The latter also has, not infrequently, the inward extension of the spots of the forewing band, but not any more marked than in *transsylvanica*, and it also differs from *retyezatensis* in having round spots in the bands, and a broad continuous band on the hindwings, while of course all the bands are of the red shade of colouring.

Another characteristic of *retyezatensis* is that the forewing bands are sharply outlined on the inner edge in the ♂s, while being almost entirely undefined in the ♀, they are also much wider in the latter. On occasions however, specimens of the ♂s do occur which, so far as the bands are concerned, are identical with the ♀s. These extreme ♂s have been described as ab. *latefasciata* by Diószeghy. The reverse form of variation also occurs in the ♂s, specimens being found without the baseward extension of the band at the apex of the forewing. On the underside *retyezatensis* is somewhat similar to *transsylvanica*, but the markings are brighter and clearer, as on the upperside, and contrast with the ground colour rather than merge into it, as in the latter.

As already stated, *retyezatensis* is really a highly developed form of *transsylvanica*, but both seem constant in their respective habitats; it is only to be expected, however, that each may produce the other

aberrationally, on occasions. *Petyezatensis* has only been recorded from the Retyezat Mts., where it is widely distributed; *transsylvanica* flies in the eastern Transylvanian Mts. and extends far north up the Carpathians, ultimately gaining its most northerly habitat in the Tatra.

(3) A dwarf race of *E. sedakorii*.

I have received a minute form of this species from Bang-Haas, both in 1929 and 1930. Measures give 38-40mm. for both sexes, as compared with 48-54mm. of ordinary specimens. A better idea of the size can be obtained from the fact that these little *sedakorii* are slightly smaller than *E. tyndarus* ssp. *murina* at the largest; i.e., as it is found in its Swiss localities in the Cantons of Vaud and Valais. This remarkable little race may be known as:—

race **sajanensis** nov. (= *sajana*, Bang-Haas, i.l.).

A dwarf race, 38-40mm. in size (centre of thorax to tip of forewing $\times 2$), otherwise exactly as the type. Habitat; Sajan Mts.

A change in the name used by Bang-Haas was necessary, *sajana* having been used more than once in *Erebia* before.

(4) Correction. *E. euryale* race *isarica*, Heyne (= *böhmervaldensis*, Warren).

I am greatly indebted to Herr J. Soffner for calling my attention to a mistake of considerable importance in my notes on this race of *euryale* (*Ent. Rec.* 1930, p. 147). Thanks to him I am now in a position to establish finally, the correct use of this very troublesome name.

In my previous article I stated that Heyne gave the name *isarica* to the insect of the *Isergebirge*, whereas the locality he actually gives is the *Isargebirge*. I was led into this mistake by the fact that, in reality, there is no mountain range of this name; I therefore took it as a misprint for *Isergebirge*. In point of fact Heyne intended his name to apply to the insect occurring in the mountains of southern Bavaria, naming them after the river *Isar*, thus using "Isargebirge" in the sense of the mountains appertaining to the river Isar. This of course makes a great difference in the correct use of the name.

Since my last article, I find that my *böhmervaldensis* is by no means confined to the Böhmer Wald, as I then supposed, but that it extends much further south right into the Bavarian Highlands. In this district, the inevitable blending of races, which I drew attention to before, takes place, and both *clanis* and *böhmervaldensis* occur, though probably keeping to separate localities, and only occurring as aberrations together; i.e., single specimens of *clanis* with *böhmervaldensis* and vice versa. I have not as many data on this point as I would like, but this is what normally occurs where two races of this species are located in close proximity.

From this it is evident that *isarica* must be used for my recently described race. There can be no doubt that Heyne did not distinguish between *clanis* and *böhmervaldensis*, and that both occur in the district he indicates, and that therefore the two are covered by the one name. Failing an actual type specimen one cannot say which race he was describing, and I doubt if such a type exists; even if there is the series of specimens he used, in any collection, it is more than likely it

would contain the two. In this case Frühstorfer's action in describing *clanis*, automatically restricted Heyne's *isarica* to the other race; i.e., *böhmerwaldensis*, for which it will stand. As a matter of fact, Heyne's description is a little more in accord with *böhmerwaldensis* than *clanis*, though not enough to be accepted as a proof by itself.

This change does not in any way alter the actual facts detailed in my last article, it is only necessary to use *isarica* instead of *böhmerwaldensis* and, of course, to note that the former does not apply to the ♀ ab. of typical *euryale* as I stated. The latter aberration had best be included under *pleniocellata*, Hartig, although that name was described as a ♂ ab. Otherwise all I wrote concerning *euryale*, *adyte*, *clanis* and *tramelana* remains unaffected. It is quite possible that *isarica* will be found in the Salzburg Alps too, some specimens of *clanis* from Styria are very close to it, in their unusually bright colour, but they still are clearly *clanis* in their other characteristics.

NOTES ON COLLECTING, etc.

PTEROSTICHUS CUPREUS, L., AB. *CAESICIUS* N.AB.—In 1903 I recorded [*Irish Nat.* 12 61 (1903)] a violet blue aberration of *Pterostichus cupreus*, L., taken near Caragh Lake, Co. Kerry, on June 17th, 1902, under the name of *coerulescens*. This name, however, cannot stand as our nearly allied species, which we used to call *P. versicolor*, Stm., is considered to be a synonym of *P. coerulescens*, L., and the Irish aberration in question is an ab. of *P. cupreus*, L. In the European Catalogue Edn. I (1891) *coerulescens* was given as an ab. of *cupreus*; hence the error.

I therefore propose the name *caesicius* n.ab. for this insect. The head, thorax, and elytra are dark violet blue, the antennae and legs black, except the first two joints of the former, the spurs, and tarsal claws, which are red. I have selected this name to avoid confusion, as there are already insects named—*Pterostichus coerulescens*, *P. violaceus*, and *P. cyaneus*.—HORACE DONISTHORPE (F.Z.S., F.E.S.).

CURRENT NOTES AND SHORT NOTICES.

In recent numbers of *Lambill. B.-J.* Lemphe of Amsterdam has been looking up the nomenclature of the numerous aberrations of the Rhopalocera which have been brought forward more or less recently, particularly those which have been published in the above magazine. Possibly we may give a summary of these when the articles with the discussions are completed.

Does anyone at the present time obtain *Apamea guenéei* which used to be obtained in large numbers near St. Anne's-on-Sea? There are other Noctuids which one hears nothing about of late years. Does anyone get *Heliophobus hispidus* (or *oditis* as we are told it should be called)? Or *Agrotis lunigera* (*trux*) which was formerly so abundant at Freshwater? Or *Callimorpha hera* the Devonshire Tiger which was for years considered as without a British character? Finally does any one sugar? The magazines give us no reports of such doing nowadays. Is the summer time all to blame? Surely some provincial collectors live near available spots for such work.

In the *Bull. Soc. Lep. Genève* 1930, there is recorded a rare monstrosity, an example of *Thestor ballus* with five wings, the right upper